

Keith Rawlings G4MIU
keith.g4miu@gmail.com

In the January 2020 edition of *PW*, I described the Marcel De Canck ON5AU book *Advanced Antenna Modelling*.

This excellent book covered modelling techniques for use with the software package EZNEC from Roy Lewallen W7EL and also the additional package of AutoEZ (Automated use of EZNEC) from Dan AC6LA.

Needless to say, when I became aware of a new book from Marcel entitled *Practical Antenna Models Volume One* I was very interested to see what was within.

Description.

This new book is of some 216 pages and comes in a slightly smaller format than the previous publication.

Its content is taken from the series of columns that Marcel wrote for the *AntenneX* online antenna magazine between 2009 and 2017 and this volume concentrates on the various forms of the dipole family.

As well as the hard copy, owners can download a pdf version of the complete book, which has colour illustrations, and this is ideal for those wishing to read the book on something like a phone or tablet.

Also, the many associated files for each section of the book are also downloadable. These consist of pre-built EZNEC models, Excel spreadsheets, Auto EZ files and neat little .exe files called Wizards, which are animated diagrams demonstrating how parameters can change as designs are altered. These files are accessed from Marcel's website.

Practical Antenna Models Volume One is effectively written in two parts. The first part, Chapter One, is termed *Antenna Fundamentals* and takes the reader through the very basics of antenna theory in a series of 'Episodes'.

With generous use of use of diagrams, the reader is introduced to subjects such as the Electric and Magnetic fields and also the Induction and Radiation fields associated with every antenna.

Basic calculations are included and, naturally, subjects such as Impedance, Resistance and SWR are described in detail. Also included is a detailed discussion on the decibel along with a very useful 'quick reference' decibel/power ratio chart.

Chapter Two (the second part) gets to grips with the dipole in its many forms. From the basic horizontal dipole through versions such as inverted, OCF (Off Centre

Practical Antenna Models (Volume 1)

Keith Rawlings G4MIU recommends another antenna book for your radio library.

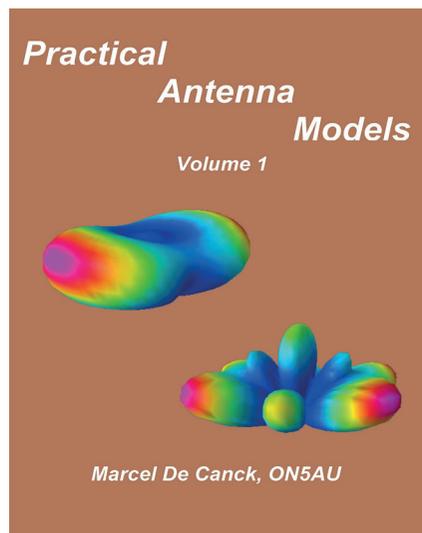


Fig 1: Animated Wizard of a Bent 80m Dipole.

Conclusions.

I thought that like *Advanced Antenna Modelling* the book was detailed, well laid out and informative.

Like the previous book, there is a heavy reliance on diagrams, and these go a long way towards making the descriptions understandable.

To be honest I found that even without taking the modelling aspects into consideration, the book alone is a wealth of information because the text and diagrams give a good insight into what can be expected from the variations of the dipole family. If you couple this with the extras that go with the book, such as pre-built models, animations, spreadsheets and so on, then the book represents excellent value and, I think, deserves a place on any antenna experimenter's bookshelf.

Availability.

The book is available from Amazon and at the time of writing is priced at £17.99 for the paperback edition and £7.62 for the Kindle Edition:

<https://tinyurl.com/y5yvuqde>

It is also available from the author:

<https://tinyurl.com/y4tczafw>

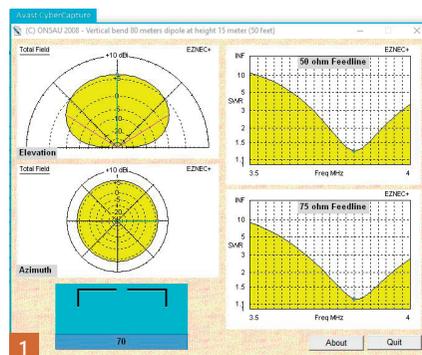
References

EZNEC:

www.ez nec.com/index.shtml

AutoEZ:

<https://ac6la.com/autoez.html>



Fed), folded, multiple, doublet, bent dipoles, making a dipole fit into available space and more, just about every configuration is covered.

Based on the use of EZNEC and AutoEZ, with diagrams, charts, and text the reader is taken through a detailed design stage and analysis of the results.

I mentioned Wizards earlier and as an example, in the case of the bent dipole, a wizard has been produced of an 80m dipole at 15m/50ft, which animates the predicted SWR, Elevation and Azimuth Polar plots as the elements position is changed, Fig. 1.

Many readers will be interested in the in-depth study of the OCF and also the doublet, with both the G5RV and ZS6BKW variants compared.

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